Ames' Jonathan Trent wins nanotechnology award

For his work in using proteins from extremophiles to create nanoscale electronic and medical devices, Ames' Jonathan Trent won a 'Nano 50 award,' that Nanotech Briefs will present to him during a conference in Boston, Nov. 9 -10, 2006.

Extremophiles are forms of life that survive in extreme conditions, including severe heat, cold and acidic conditions, among others. Nanotech Briefs, launched in January 2004, is a digital magazine from the publishers of NASA Tech Briefs.

"Our innovation takes advantage of the innate ability of proteins to form into ordered structures and for us to use genetic engineering to change nature's plans, transforming these structures into something useful," said Trent, principal investigator of a research project to produce 'nano-electronics' at NASA Ames. A nanometer is roughly 100,000 times smaller than the width of a human hair. "Building structures on the nanoscale is an incredible engineering challenge," he said.

Trent currently is working on two related nanotechnology projects. "We are attempting to get funding from the Department of Energy (DOE) to support our research on bio-nano technology," he said. "We have one project to transform sawdust into ethanol for the DOE bio-fuel initiative. We're also working on bio-sensors to detect bio threats, or any form of life, which may be interesting to NASA's future Mars missions."

The Nano 50 awards recognize the top 50 technologies, products and innovators that have significantly impacted - or are expected to impact - the state of the art in nanotechnology.

by John Bluck